

WHAT IS CLAIMED IS:

1. A spare tire carrier for vehicles which comprises:  
a support arm for mounting a spare tire thereon, said support arm having a fixed end and a free end and a central axis; and  
a cooperating tubular assembly coupled to the fixed end of the support arm for mounting the support arm a vehicle, said cooperating tubular assembly including upper and lower opposed guide plates which provide for relative rotational movement there between to simultaneously effect pivotal movement of the support arm with respect to the cooperative tubular assembly while effecting rotational movement of the support arm about its central axis.
2. A spare tire carrier for vehicles according to claim 1, wherein the cooperating tubular assembly comprises an upper tubular member to which the upper guide plate is attached and a lower tubular member to which the lower guide plate is attached.
3. A spare tire carrier for vehicles according to claim 2, wherein the upper and lower tubular members each have a central axis and the upper and lower guide plates are respectively attached to the upper and lower tubular members at an angle that is non-perpendicular to the central axes of the upper and lower tubular members.
4. A spare tire carrier for vehicles according to claim 2, wherein the upper and lower tubular members are substantially collinear.

5. A spare tire carrier for vehicles according to claim 2, wherein at least one of the upper and lower tubular members is hollow.

6. A spare tire carrier for vehicles according to claim 2, wherein the upper and lower guide plates are coupled together about an axially central element that extends through at least one of the upper and lower guide plate.

7. A spare tire carrier for vehicles according to claim 6, wherein the axially central member comprises a threaded member.

8. A spare tire carrier for vehicles according to claim 1, further including a latch mechanism for engaging the free end of the support arm.

9. A vehicle including a spare tire carrier mounted to an under side of the vehicle, which spare tire carrier comprises:

a support arm for mounting a spare tire thereon, said support arm having a fixed end and a free end and a central axis; and

a cooperating tubular assembly coupling the fixed end of the support arm to the under side of the vehicle, said cooperating tubular assembly including upper and lower opposed guide plates which provide for relative rotational movement there between to simultaneously effect pivotal movement of the support arm with respect to the cooperative tubular assembly while effecting rotational movement of the support arm about its central axis.

10. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 9, wherein the cooperating tubular assembly comprises an upper tubular member to which the upper guide plate is attached and a lower tubular member to which the lower guide plate is attached.

11. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 10, wherein the upper and lower tubular members each have a central axis and the upper and lower guide plates are respectively attached to the upper and lower tubular members at an angle that is non-perpendicular to the central axes of the upper and lower tubular members.

12. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 10, wherein the upper and lower tubular members are substantially collinear.

13. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 10, wherein at least one of the upper and lower tubular members is hollow.

14. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 10, wherein the upper and lower guide plates are coupled together about an axially central element that extends through at least one of the upper and lower guide plate.

15. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 14, wherein the axially central member comprises a threaded member.

16. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 9, further including a latch mechanism for engaging the free end of the support arm.

17. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 16, wherein the free end of the support arm includes structure for the latch mechanism to engage.

18. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 9, wherein the vehicle comprises one of a motor vehicle and a non-motor vehicle.

19. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 18, wherein the vehicle comprises a towed vehicle.

20. A vehicle including a spare tire carrier mounted to an under side of the vehicle according to claim 19, wherein the vehicle comprises one of a camper and a trailer.